State of Utah

Department of
Environmental Quality

Richard W. Sprott
Executive Director

DIVISION OF AIR QUALITY
Cheryl Heying
Director

JON M. HUNTSMAN, JR.
Governor

GARY HERBERT
Lieutenant Governor

DAQE-IN0123210005-08

July 29, 2008

Trent Sorensen
HS&E Engineer
Honeywell Electronic Materials
4603 West 2100 South
Salt Lake City, Utah 84120-1221

Dear Mr. Sorensen:

Re: Intent to Approve: Request to Modify Approval Order DAQE-AN2321003-06 to Change Equipment and Change Company Name, Salt Lake County – CDS B; NA; MAINT; HAPs
Project Code: N012321-0005

The attached document is the Intent to Approve for the above-referenced project. The Intent to Approve is subject to public review. Any comments received shall be considered before an Approval Order is issued.

Future correspondence on this Intent to Approve should include the engineer's name as well as the DAQE number as shown on the upper right-hand corner of this letter. Please direct any questions you may have on this project to Mr. Alan Humpherys. He may be reached at (801) 536-4142.

Sincerely,

John T. Blanchard, Manager
Minor New Source Review Section

JTB:AH:sa

cc: Salt Lake Valley Health Department

STATE OF UTAH

Department of Environmental Quality

Division of Air Quality

INTENT TO APPROVE: Request to Modify Approval Order DAQE-AN2321003-06 to Change Equipment and Change Company Name

Prepared By: Alan Humpherys, Engineer
(801) 536-4142
Email: ahumpherys@utah.gov

INTENT TO APPROVE NUMBER

DAQE-IN0123210005-08

Date: July 29, 2008

Honeywell Electronic Materials

Source Contact
Trent Sorensen
(801) 886-2957

M. Cheryl Heying
Executive Secretary
Utah Air Quality Board

Abstract

Honeywell Electronic Materials operates a titanium production facility and has requested a modification to their Approval Order. The existing process of passing the material through two crushers will be replaced with a single crushing operation. An excavator will be added to reduce the material size sufficient to be loaded into the single crusher. A second optional line will be added to allow the option to produce titanium powder. Several equipment descriptions will be changed to better reflect their function. These changes will result in a decrease in emissions. In addition to these changes, Honeywell Electronic Materials has requested to clarify the name of the party responsible for this Approval Order. The Utah Division of Air Quality has noted in its records that the holder and party responsible for complying with the terms and conditions contained in this Approval Order has been changed to "Honeywell Electronic Materials" parent company "Honeywell International, Inc."

Salt Lake County is a Non-attainment area of the National Ambient Air Quality Standards (NAAQS) for PM_{10} and SO_2, and is a Maintenance area for CO and O_3.

New Source Performance Standards (NSPS), National Emission Standards for Hazardous Air Pollutants (NESHAP) and Maximum Achievable Control Technology (MACT) regulations do not apply to this source. Title V of the 1990 Clean Air Act does not apply to this source.

There will be a 0.35 tons per year decrease in PM_{10} emissions.

The changes in emissions will result in the following, in tons per year, potential to emit totals: PM_{10} = 2.60, NO_x = 3.36, SO_2 = 0.04, CO = 5.64, VOC = 0.37, HAPs = 0.17

The Notice of Intent (NOI) for the above-referenced project has been evaluated and has been found to be consistent with the requirements of the Utah Administrative Code Rule 307 (UAC R307). Air pollution producing sources and/or their air control facilities may not be constructed, installed, established, or modified prior to the issuance of an Approval Order by the Executive Secretary of the Utah Air Quality Board.

A 30-day public comment period will be held in accordance with UAC R307-401-7. A notice of intent to approve will be published in the Salt Lake Tribune and Deseret News on August 2, 2008. During the public comment period, the proposal and the evaluation of its impact on air quality will be available for both you and the public to review and comment. If anyone so requests a public hearing, it will be held in accordance with UAC R307-401-7. The hearing will be held as close as practicable to the location of the source. Any comments received during the public comment period and the hearing will be evaluated.

Please review the proposed Approval Order conditions during this period and make any comments you may have. The proposed conditions of the Approval Order may be changed as a result of the comments received. Unless changed, the Approval Order will be based upon the following conditions:

General Conditions:

1. This Approval Order applies to the following company:

Site Office	Corporate Office Location
Honeywell Electronic Materials	Honeywell International, Inc.
4603 West 2100 South	101 Columbia Road
Salt Lake City, Utah 84120-1221	Morristown, New Jersey 07962

Phone Number (801) 886-2957 (973) 455-2000
Fax Number (801) 886-2933

The equipment listed in this Approval Order shall be operated at the following location:

4603 West 2100 South, Salt Lake City, Utah, Salt Lake County

Universal Transverse Mercator (UTM) Coordinate System: UTM Datum NAD27
4,508.5 kilometers Northing, 415.4 kilometers Easting, Zone 12

2. All definitions, terms, abbreviations, and references used in this Approval Order (AO) conform to those used in the UAC R307 and Title 40 of the Code of Federal Regulations (40 CFR). Unless noted otherwise, references cited in these AO conditions refer to those rules.

3. The limits set forth in this AO shall not be exceeded without prior approval in accordance with R307-401.

4. Modifications to the equipment or processes approved by this AO that could affect the emissions covered by this AO must be reviewed and approved in accordance with R307-401.

5. All records referenced in this AO, which are required to be kept by the owner/operator, shall be made available to the Executive Secretary or Executive Secretary's representative upon request. Records shall be kept for a minimum period of two years.

6. Honeywell Electronic Materials (Honeywell) shall install and operate the Titanium production equipment and shall conduct its operations of the Titanium Production Facility in accordance with the terms and conditions of this AO, which was written pursuant to Honeywell's NOI submitted to the Division of Air Quality (DAQ) on June 11, 2008.

7. This AO shall replace the AO (DAQE-AN2321003-06) dated December 11, 2006.

8. The approved installations shall consist of the following equipment or equivalent*:

A. Titanium Venturi/Packed Scrubber

Efficiency:	99%
Outlet emissions level:	0.05 grain/dscf
Flow Rate:	8,500 acfm
Pressure Drop:	Maximum of 8.0" w.c.

B. Venturi Scrubber/Cyclone Separator System

Efficiency:	95%
Flow Rate:	15,000 acfm
Pressure Drop:	Minimum of 36" w.c.

C. Titanium Tetrachloride Storage Tank
(vented to the Venturi/Packed Scrubber system (8.A))

Size:	6,600 gallons

D. Titanium Tetrachloride Backup Tank
(vented to the Venturi/Packed Scrubber system (8.A))
Size: 6,600 gallons

E. Titanium Reactor Vessels and Lids
(vented to the Venturi/Packed Scrubber system (8.A))

F. Three (3) Titanium Tetrachloride Measure Vessels
(vented to the Venturi/Packed Scrubber system (8.A))

G. Sodium Measure Vessel Storage Tank

H. Three (3) Reactor Furnaces (< 5 MMBTU each)

I. Steam Cleaning and Power Washing Equipment located in one (1) washroom
(vented to the Venturi Scrubber/Cyclone Separator System (8.B))

J. Titanium Crusher, magnetic separator and conveyors
(vented to the Venturi Scrubber/Cyclone Separator System (8.B))

K. Dupont Powder Line – Hammermill Crusher, magnetic separator and conveyors
(vented to the Venturi Scrubber/Cyclone Separator System (8.B))

L. Two (2) Titanium Knockout Rooms
(vented to the Venturi Scrubber/Cyclone Separator System (8.B))

M. One (1) Titanium Rotary Leacher
(vented to the Venturi Scrubber/Cyclone Separator System (8.B))

N. Two (2) Finishing Tanks

O. Titanium Vacuum Drying Oven and Hoppers
(vented internally)

P. Screens for product sizing and drum collection
(vented internally)

Q. Boiler
Capacity: 4.0 MMBTU per hour

R. Hot Water Heater
Capacity: 0.85 MMBTU per hour

S. Hydrochloric Acid (HCl) Tote and Piping
(vented to the Venturi Scrubber/Cyclone Separator System (8.B))
Size: 330 gallons

T. Desalter Tank and Piping – Contains 1 pH solution of HCl acid
(vented to the Venturi Scrubber/Cyclone Separator System (8.B))
Size: 700 gallons

U. Three (3) Vacuum Pumps
(vented to the Venturi Scrubber/Cyclone Separator System (8.B))

V. Analytical Laboratory (equipment)
Laboratory Fume Cabinet/Hood
Induction Coupled Plasma (ICP) Analytical Instrument

W. 55 hp Excavator**

X. 1,000 Gallon Storage Tank**

* Equivalency shall be determined by the Executive Secretary.

** This equipment is listed for informational purposes only.

9. Honeywell shall notify the Executive Secretary in writing when the installation of the equipment listed in this AO has been completed and is operational. To insure proper credit when notifying the Executive Secretary, send your correspondence to the Executive Secretary, attn: Compliance Section.

If the construction and/or installation has not been completed within 18 months from the date of this AO, the Executive Secretary shall be notified in writing on the status of the construction and/or installation. At that time, the Executive Secretary shall require documentation of the continuous construction and/or installation of the operation and may revoke the AO in accordance with R307-401-18.

Limitations and Test Procedures

10. The Venturi/packed scrubber (listed in Condition 8.A) shall control process streams from the titanium tetrachloride storage vessel and reaction process. All exhaust air from the reaction process shall be routed through the Venturi scrubber before being vented to the atmosphere. The Venturi/packed scrubber system controls emissions from the following sources:

- Titanium Tetrachloride Storage Tank
- Titanium Tetrachloride Backup Tank
- Titanium Reactor Vessels and Lids
- Three (3) Titanium Tetrachloride Measure Vessels

11. All exhaust air from the sources listed below shall be routed through the Venturi scrubber/cyclone separator system (listed in Condition 8.B) before being vented to the atmosphere. The Venturi scrubber/cyclone separator system controls emissions from the following sources:

- Steam Cleaning and Power Washing Equipment located in one (1) washroom
- Titanium Crusher, Magnetic Separator, and Conveyors
- Dupont Powder Line – Hammermill Crusher, Magnetic Separator, and Conveyors
- Two (2) Titanium Knockout Rooms
- One (1) Titanium Rotary Leachers
- Hydrochloric Acid Tanks and Piping
- Three (3) Vacuum Pumps
- Two (2) Finishing Tanks

12. Visible emissions from the following emission points shall not exceed the following values:

    A. Venturi/Packed scrubber and Venturi scrubber/cyclone separator – 10% opacity

    B. Combustion Sources – 10% opacity

    Opacity observations of emissions from stationary sources shall be conducted according to 40 CFR 60, Appendix A, Method 9.

13. The following operating parameters shall be maintained within the indicated ranges:

    Titanium Venturi/Packed Scrubber

    A. The scrubbing liquid flow rate through Venturi shall not be less than 14 gallons per minute for more than five minutes in any 60-minute period of operation.

    B. The scrubbing liquid flow rate through the packed column shall not be less than two gallons per minute for more than five minutes in any 60-minute period of operation.

    C. The pressure drop across the scrubber shall not be more than 8.0" for more than five minutes in any 60-minute period.

    Venturi Scrubber/Cyclone Separator System

    A. The scrubbing liquid flow rate through Venturi shall not be less than 145 gallons per minute for more than five minutes in any 60-minute period of operation.

    B. The pressure drop across the scrubber shall not be less than 36" for more than five minutes in any 60-minutes period of operation.

    They shall be monitored with equipment located such that an inspector/operator can safely read the output at any time.

14. The following production limits shall not be exceeded:

    A. 848 tons of Titanium produced per rolling 12-month period

    To determine compliance with a rolling 12-month total, the owner/operator shall calculate a new 12-month total by the twentieth day of each month using data from the previous 12 months. Records of production shall be kept for all periods when the plant is in operation. Production shall be determined by Honeywell's own method. The records of production shall be kept on a daily basis.

Fuels

15. The owner/operator shall use only natural gas as fuel in the titanium operation.

Records & Miscellaneous

16. At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any equipment approved under this AO, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on the information available to the Executive Secretary which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. All maintenance performed on the equipment authorized by this AO shall be recorded.

17. The owner/operator shall comply with R307-107. General Requirements: Unavoidable Breakdowns.

The Executive Secretary shall be notified in writing if the company is sold or changes its name.

Under R307-150-1, the Executive Secretary may require a source to submit an emission inventory for any full or partial year on reasonable notice.

This AO in no way releases the owner or operator from any liability for compliance with all other applicable federal, state, and local regulations including R307.

A copy of the rules, regulations and/or attachments addressed in this AO may be obtained by contacting the DAQ. The UAC R307 rules used by DAQ, the NOI guide, and other air quality documents and forms may also be obtained on the Internet at the following web site:

http://www.airquality.utah.gov/

The annual emissions estimations below include point source emissions and do not include fugitive emissions, fugitive dust, road dust, tail pipe emissions, grandfathered emissions etc. These emissions are for the purpose of determining the applicability of Prevention of Significant Deterioration, non-attainment area, Maintenance area, and Title V source requirements of the R307. They are not to be used for determining compliance.

The Potential To Emit (PTE) emissions for this source (the entire plant) are currently calculated at the following values:

	Pollutant	Tons/yr
A.	PM_{10}	2.60
B.	SO_2	0.04
C.	NO_x	3.36
D.	CO	5.64
E.	VOC	0.37
F.	HAPs	
	Hydrochloric Acid (HCl)	0.01
	Titanium Tetrachloride	0.15
	Total HAPs	0.17

The DAQ is authorized to charge a fee for reimbursement of the actual costs incurred in the issuance of an AO. An invoice will follow upon issuance of the final AO.

Sincerely,

John T. Blanchard, Manager
Minor New Source Review Section